WHAT IS CLAIMED IS:

1.   A network device connected to a host, comprising:

an address table configured to store a plurality of entries;

an address register accessible by the host and configured to store an address of one of the entries in the address table;

5   an address table access port accessible by the host and configured to store contents of one of the entries in the address table; and

table access logic configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and

10   store contents of the one entry in the address table access port for access by the host.

2.   The network device of claim 1, wherein the table access logic is configured to receive a command from the host to read a next one of the entries in the address table, locate the next entry in the address table, store an address of the next entry in the address register for access by the host, and store contents of the next entry in the address table access port for

5   access by the host.

3.   The network device of claim 2, wherein when locating the next entry, the table access logic is configured to read an address from the address register to identify a currently addressed one of the entries, read a pointer from the currently addressed entry, and locate the next entry using the pointer.

4.   The network device of claim 1, wherein the table access logic is configured to receive a command from the host to read a first one of the entries in the address table, locate the first entry in the address table, store an address of the first entry in the address register for access by the host, and store contents of the first entry in the address table access port for

5   access by the host.

5.   The network device of claim 1, wherein the entries include bin entries and heap entries, at least one of the bin entries including a pointer to one of the heap entries, at least one of the heap entries including a pointer to another one of the heap entries.

6. The network device of claim 1, further comprising:

an input data holding register configured to store data corresponding to a new entry to be created in the address table or an existing one of the entries to be modified or deleted from the address table.

7. The network device of claim 6, wherein the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table.

8. The network device of claim 6, wherein the table access logic is further configured to receive a modify table entry command from the host, locate one of the entries in the address table to modify using the data from the input data holding register, and overwrite the located entry with the data from the input data holding register.

9. The network device of claim 8, wherein when locating one of the entries to modify, the table access logic is configured to read a source address and virtual local area network (VLAN) identifier from the input data holding register and find one of the entries in the address table with a matching source address and VLAN identifier.

10. The network device of claim 6, wherein the table access logic is further configured to receive a delete table entry command from the host, locate one of the entries in the address table to delete using the data from the input data holding register, and delete the located entry from the address table.

11. The network device of claim 10, wherein when locating one of the entries to delete, the table access logic is configured to read a source address and virtual local area network (VLAN) identifier from the input data holding register and find one of the entries in the address table with a matching source address and VLAN identifier.

12. A network device connected to a host, comprising:

an address table configured to store a plurality of entries;

an input data holding register configured to store data corresponding to a new entry to

be created in the address table or an existing one of the entries to be modified or deleted from

5   the address table; and

table access logic configured to receive at least one of a modify table entry command and a delete table entry command from the host, apply a hashing function to the data in the input data holding register, search the address table to locate one of the entries to modify or delete using the hashed data, overwrite the located entry with the data from the input data

10   holding register when the command is the modify table entry command, and delete the located entry from the address table when the command is the delete table entry command.

13.   The network device of claim 12, wherein when searching the address table, the table access logic is configured to read a source address and virtual local area network (VLAN) identifier from the input data holding register and find one of the entries in the address table with a matching source address and VLAN identifier.

14.   The network device of claim 12, wherein the table access logic is further configured to receive an insert table entry command from the host, find a location in the address table to create a new entry, and store the data from the input data holding register at the location in the address table.

15.   The network device of claim 12, further comprising:

an address register accessible by the host and configured to store an address of one of the entries in the address table; and

an address table access port accessible by the host and configured to store contents of

5   one of the entries in the address table.

16.   The network device of claim 15, wherein the table access logic is further configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in

5   the address table access port for access by the host.

17.   The network device of claim 16, wherein the table access logic is configured to receive a command from the host to read a next one of the entries in the address table, locate a

currently addressed one of the entries using the address from the address register, read a pointer from the currently addressed entry, locate the next entry using the pointer, store an

5   address of the next entry in the address register for access by the host, and store contents of the next entry in the address table access port for access by the host.

18.   The network device of claim 16, wherein the table access logic is configured to receive a command from the host to read a first one of the entries in the address table, locate the first entry in the address table, store an address of the first entry in the address register for access by the host, and store contents of the first entry in the address table access port for

5   access by the host.

19.   A network device connected to a host, comprising:

an address table configured to store a plurality of entries;

an address register accessible by the host and configured to store an address of one of the entries in the address table;

5   an address table access port accessible by the host and configured to store contents of one of the entries in the address table;

an input data holding register configured to store data for a new entry to be created in the address table or an existing one of the entries to be modified or deleted from the address table; and

10   table access logic configured to receive a command from the host to read one of the entries in the address table, locate the one entry in the address table in response to the command, store an address of the one entry in the address register for access by the host, and store contents of the one entry in the address table access port for access by the host, the table access logic being further configured to receive at least one of a modify table entry command

15   and a delete table entry command from the host, locate one of the entries in the address table to modify or delete using the data from the input data holding register, overwrite the located entry with the data from the input data holding register when the table access logic receives the modify table entry command, and delete the located entry from the address table when the table access logic receives the delete table entry command.

20.   The network device of claim 19, wherein when locating one of the entries to modify or delete, the table access logic is configured to read a source address and virtual local

area network (VLAN) identifier from the input data holding register and find one of the entries in the address table with a matching source address and VLAN identifier.